



Doc Code: AP.PRE.REQ

PTO/SB/33 (07-05)

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**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Docket Number (Optional)

99-S-190 (1678-022-01)

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on February 28, 2008

Signature

Typed or printed name J. Mark Han

Application Number

09/993,877

Filed

November 5, 2001

First Named Inventor  
Hakan Ozdemir

Art Unit

2627

Examiner

Dismery E. Mercedes

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

☐

applicant/inventor.

☐

assignee of record of the entire interest.

See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.  
(Form PTO/SB/96)☒

attorney or agent of record.

Registration number 57,898☐

attorney or agent acting under 37 CFR 1.34.

Registration number if acting under 37 CFR 1.34 \_\_\_\_\_

Signature

J. Mark Han

Typed or printed name

425-455-5575

Telephone number

February 28, 2008

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below\*.

☒\*Total of 1 forms are submitted.

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant(s): Hakan Ozdemir

Title: **DATA-STORAGE DISK HAVING FEW OR NO SPIN-UP  
WEDGES AND METHOD FOR WRITING SERVO  
WEDGES ON TO THE DISK**

Application No.: 09/993,877

Filing Date: November 5, 2001

Examiner/Unit: Dismery E. Mercedes / 2627

Attorney Docket No.: 99-S-190 (1678-022-01)

**CERTIFICATE OF MAILING**

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on this 28<sup>th</sup> day of February, 2008.

  
Signature

**REASONS FOR PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Sir:

In accordance with the Pre-Appeal Brief Request for Review, Applicants submit the following:

Claims 1-32 are pending in the application.

Claims 5-7 are allowed. Claims 30-31 are allowable if rewritten in independent form.

The Applicant's attorney is requesting review of claims 1-4, 8-29 and 32 as listed in the response (mailed July 9, 2007) to the Office Action (mailed March 7, 2007).

On September 28, 2007, the USPTO mailed a final Office Action maintaining the rejection of claims 1-4, 8-29 and 32.

The Applicant's attorney disputes the Examiner's contention that claims 1-4, 8-29 and 32 do not place the application in condition for allowance.

Independent claim 1 recites a servo wedge located at the beginning of a disk sector and operable without a zero-frequency field to identify the sector in conjunction with an initial positioning of a read-write head and a read of the data from or write of the data to the disk sector. For example, in an embodiment, a servo wedge 22 includes a preamble 74, a servo synchronization mark (SSM) 76, head-location identifier 78 and bursts 84a-84n (FIGS. 4 and 6). A servo circuit 30 exploits the properties of a sinusoid to detect the preamble 74, searches for the SSM 76 within a predetermined time window, and then recovers the location identifier 78 which a head-position circuit 214 uses to determine an initial position of a read-write head 32. In this way, the servo wedge 22 is operable to provide an initial head position on disk spin-up without the use of a zero-frequency field (otherwise known as a DC erase field). As a result, the disk's data-storage capacity can be increased by reducing the number of, or altogether eliminating, servo wedges that include DC erase fields that are used only during disk spin-up.

The Examiner's argument on page 3 of the final Office Action (mailed September 28, 2007) is that Patapoutian (US 5,661,760) discloses a servo wedge 68 having an optional DC erase field 731 (FIG. 4; col. 6, lines 47-53), and therefore no DC erase field. However, the DC erase field 731 in Patapoutian is considered optional simply because not every servo wedge 68 must have a DC erase field.

Even though not all of the servo wedges 68 have a DC erase field 731, there still must be enough DC erase fields so that during disk spin-up, the head 26 encounters at least one DC erase field to determine an initial position of the head 26 on spin-up. In other words, Patapoutian has to detect at least one DC erase field during spin-up. Patapoutian does not teach that you can determine the initial position of the head upon spin-up of the disk without using a DC erase field, but instead simply teaches that a DC erase field may not be in every single servo wedge. After reviewing Patapoutian in its entirety, the Applicant's attorney is unable find any mention of a servo wedge without a DC erase field (or zero-frequency field) that is operable to identify a disk sector in conjunction with an initial positioning of a read-write head upon spin-up of the disk. There is simply no mention in Patapoutian of any means of identifying a disk sector without the use of a zero-frequency field during an initial positioning of the read-write head upon spin-up of the disk. Therefore, Patapoutian does not satisfy all of the limitations of claim 1.

Independent claims 3, 8 and 32 include limitations similar to claim 1 and, therefore, are patentable for reasons similar to those recited in support of the patentability of claim 1.

Independent claim 25 is a method claim including limitations similar to claim 1 and, therefore, is patentable for reasons similar to those recited in support of the patentability of claim 1.

Independent claim 14 recites a processor operable to detect one of the servo wedges without a zero-frequency field while or after the disk attains an operating speed but before the servo channel recovers servo data from any other of the servo wedges. For example, in an embodiment, a servo wedge 22 includes a preamble 74, a servo synchronization mark (SSM) 76, head-location identifier 78 and bursts 84a-84n (FIGS 4 and 6). A servo circuit 30 exploits the properties of a sinusoid to detect the preamble 74, searches for the SSM 76 within a predetermined time window, and then recovers the location identifier 78 which a head-position circuit 214 uses to determine an initial position of a read-write head 32. In this way, the servo wedge 22 is operable to provide initial head position on disk spin-up without

the use of a zero-frequency field and before servo data is recovered from any other of the servo wedges. Tuttle (US 6,108,151), on the other hand, does not disclose a processor operable to detect one of the servo wedges without a zero-frequency field while or after the disk attains an operating speed but before the servo channel recovers servo data from any other of the servo wedges. Instead, Tuttle specifically states that a special sequence of bits (long sequence of "0" bits) is recorded in at least one of the servo wedges, and that this zero-frequency field must first be detected before the read channel can locate and acquire the remaining servo wedges (col. 15, lines 19-30). Therefore, in light of the reasons recited in support of the patentability of claim 1, the combination of Tuttle and Patapoutian does not satisfy all of the limitations of claim 14.

Independent claim 20 includes limitations similar to claim 14 and, therefore, is patentable for reasons similar to those recited in support of the patentability of claim 14.

Independent claim 29 is a method claim including limitations similar to claim 14 and, therefore, is patentable for reasons similar to those recited in support of the patentability of claim 14.

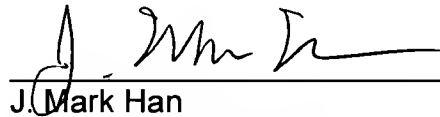
Consequently, in light of the above, claims 1-4, 8-29 and 32 are in condition for allowance over the cited prior art.

In the event additional fees are due, payment for those fees has been enclosed in the form of a check. Should further payment be required to cover such fees, you are hereby authorized to charge such payment to Deposit Account No. 07-1897.

DATED this 28<sup>th</sup> day of February, 2008.

Respectfully submitted,

GRAYBEAL JACKSON HALEY LLP

A handwritten signature in black ink, appearing to read "J. Mark Han", is written over a horizontal line.

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